

IN THE CLAIMS

Please make the following claim substitutions:

1 1. (Original) A method for use in at least a portion of a wireless communication
2 system in which signals are communicated between at least one of one or more base
3 stations and respective ones of a plurality of terminals, the method comprising the steps
4 of:

5 using a compensation scheme to compensate for interference among the
6 signals, the compensation being performed using an order of the terminals that defines
7 which terminals' signals are used to compensate for interference in which other
8 terminals' signals; and

9 assigning at least one operating parameter value to at least one of the terminals,
10 the assigning being based on a predetermined methodology, the methodology being
11 based on one or more criteria none of which is the theoretically highest system
12 throughput.

1 2. (Original) The method of claim 1, wherein the operating parameter includes at
2 least one of the following: data rate, power level, and set of data rates.

1 3. (Original) The method of claim 1, wherein the operating parameter values are
2 assigned to the terminals in the order.

1 4. (Original) The method of claim 1, wherein the terminals are mobile terminals.

1 5. (Original) The method of claim 1, wherein at least one of operating parameter
2 values of terminals, of the plurality, that have a lower index in the order will not be made
3 worse due to the presence of terminals, of the plurality, having a higher index in the
4 order, the operating parameter values include the assigned operating parameter value.

1 6. (Original) The method of claim 1, wherein:
2 the compensation scheme is dirty paper coding; and
3 the signals comprise downlink signals, downlink signals being signals
4 communicated from the one or more base stations to the respective ones of the plurality
5 of terminals.

1 7. (Original) The method of claim 1, wherein:

2 the signals comprise downlink signals and uplink signals, downlink signals being
3 signals communicated from the one or more base stations to the respective ones of the
4 plurality of terminals, uplink signals being signals communicated to the one or more
5 base stations from the respective ones of the plurality of terminals;

6 the compensation scheme is used for downlink signals; and

7 a second compensation scheme is used for uplink signals to compensate for
8 interference among the uplink signals uplink, the compensation being performed using a
9 second order of the terminals that defines which terminals' uplink signals are used to
10 compensate for interference in which other terminals' uplink signals.

1 8. (Original) The method of claim 7, wherein the second order is based on at
2 least one different criterion than the first order.

1 9. (Original) The method of claim 1, wherein the order is based on at least one
2 of the following criteria:

3 the order in which the terminals of the plurality initiated a communication session
4 with the one or more base stations;

5 the reverse of the order in which the terminals of the plurality initiated a
6 communication session with the one or more base stations;

7 the respective amounts of data to be transmitted between the terminals and the
8 one or more base stations; and

9 randomness.

1 10. (Original) The method of claim 1, wherein the order is defined by:

2 a) identifying an individual one of the terminals for which a certain operating
3 parameter value would be optimal in the absence of interference from the other
4 terminals in the plurality;

5 b) assigning the individual terminal in step a) to have an index of 1;

6 c) identifying another individual one of the terminals for which the certain
7 operating parameter value would be optimal in the presence of interference from the
8 assigned terminals in the plurality and in the absence of interference from unassigned

9 terminals in the plurality;

10 d) assigning the individual terminal in step c) to have the next yet unassigned
11 index in the order; and

12 e) repeating steps c) and d) until all of the terminals in the plurality are assigned
13 an index in the order.

1 11. (Original) The method of claim 10, wherein:

2 the certain operating parameter comprises data rate; and

3 the optimal operating parameter value is the data rate having the highest
4 magnitude of the data rates of the respective terminals.

1 12. (Original) The method of claim 11, wherein at least one other operating
2 parameter of the terminals is fixed.

1 13. (Original) The method of claim 1, wherein, in the portion, signals are
2 communicated between at least one of the one or more base stations and a respective
3 one of a second plurality of terminals, and the method further comprises the step of:

4 using a second compensation scheme to compensate for interference among the
5 signals between the at least one of the one or more base stations and the second
6 plurality of terminals, the compensation being performed using a second order to
7 determine which of the second plurality terminals' signals are used to compensate for
8 interference in which other of the second plurality terminals' signals.

9

1 14. (Original) A method for use in at least a portion of a wireless communication
2 system in which signals are communicated between at least one of one or more base
3 stations and respective ones of a plurality of terminals, the method comprising the steps
4 of:

5 using a compensation scheme to compensate for interference among the
6 signals, the compensation being performed using an order of the terminals that defines
7 which terminals' signals are used to compensate for interference in which other
8 terminals' signals; and

9 assigning at least one operating parameter value to the terminals in the plurality,

10 the assignment to a particular terminal being such that at least one of operating
11 parameter values of terminals, of the plurality, that have a lower index in the order will
12 not be made worse due to the presence of terminals, of the plurality, having a higher
13 index in the order, the operating parameter values include the assigned operating
14 parameter value.

1 15. (Original) The method of claim 14, wherein the operating parameter
2 includes at least one of the following: data rate, power level, and set of data rates.

1 16. (Original) The method of claim 14, wherein the operating parameter values
2 are assigned to the terminals in the order.

1 17. (Original) The method of claim 14, wherein the terminals are mobile
2 terminals.

1 18. (Original) The method of claim 14, wherein:
2 the compensation scheme is dirty paper coding; and
3 the signals comprise downlink signals, downlink signals being signals
4 communicated from the one or more base stations to the respective ones of the plurality
5 of terminals.

1 19. (Original) The method of claim 14, wherein:
2 the signals comprise downlink signals and uplink signals, downlink signals being
3 signals communicated from the one or more base stations to the respective ones of the
4 plurality of terminals, uplink signals being signals communicated to the one or more
5 base stations from the respective ones of the plurality of terminals;
6 the compensation scheme is used for downlink signals; and
7 a second compensation scheme is used for uplink signals to compensate for
8 interference among the uplink signals uplink, the compensation being performed using a
9 second order of the terminals that defines which terminals' uplink signals are used to
10 compensate for interference in which other terminals' uplink signals.

1 20. (Original) The method of claim 19, wherein second order is based on at
2 least one different criterion than the first order.

1 21. (Original) The method of claim 14, wherein the order is based on at least
2 one of the following criteria:

3 the order in which the terminals of the plurality initiated a communication session
4 with the one or more base stations;

5 the reverse of the order in which the terminals of the plurality initiated a
6 communication session with the one or more base stations;

7 the respective amounts of data to be transmitted between the terminals and the
8 one or more base stations; and

9 randomness.

1 22. (Original) The method of claim 14, wherein the order is defined by:

2 a) identifying an individual one of the terminals for which a certain operating
3 parameter value would be optimal in the absence of interference from the other
4 terminals in the plurality;

5 b) assigning the individual terminal in step a) to have an index of one;

6 c) identifying another individual one of the terminals for which the certain
7 operating parameter value would be optimal in the presence of interference from the
8 assigned terminals in the plurality and in the absence of interference from unassigned
9 terminals in the plurality;

10 d) assigning the individual terminal in step c) to have the next yet unassigned
11 index in the order; and

12 e) repeating steps c) and d) until all of the terminals in the plurality are assigned
13 an index in the order.

1 23. (Original) The method of claim 22, wherein:

2 the operating parameter comprises data rate; and

3 the optimal operating parameter value is the data rate having the highest
4 magnitude of the data rates of the respective terminals.

1 24. (Original) The method of claim 23, wherein at least one other operating
2 parameter of the terminals is fixed.

1 25. (Original) The method of claim 14, wherein in the portion signals are
2 communicated between at least one of the one or more base stations and a respective
3 one of a second plurality of terminals, and the method further comprises the step of:

4 using a second compensation scheme to compensate for interference among the
5 signals between the at least one of the one or more base stations and the second
6 plurality of terminals, the compensation being performed using a second order to
7 determine which of the second plurality terminals' signals are used to compensate for
8 interference in which other of the second plurality terminals' signals.

1 26. (Original) A method for use in at least a portion of a wireless
2 communication system in which signals are communicated between at least one of one
3 or more base stations and respective ones of a plurality of terminals, the method
4 comprising the steps of:

5 using a compensation scheme to compensate for interference among the
6 signals, the compensation being performed using an order of the terminals that defines
7 which terminals' signals are used to compensate for interference in which other
8 terminals' signals; and

9 assigning a data rate to the terminal such that the data rates of the terminals
10 having a lower index in the order will not be decreased due to the presence of the
11 terminals having a higher index in the order, and without changing the power covariance
12 matrixes of antennas involved in the communication with the terminals having the lower
13 index.